CITY OF
CHULA VISTA

APPENDIX B

STANDARD URBAN STORM WATER MITIGATION PLAN

(SUSMP) REQUIREMENTS

November 19, 2002

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I. Priority Projects

The San Diego Regional Water Quality Control Board (Regional Board) has determined that the following development project categories are potential dischargers of pollutants during the life of the project, and need to develop and implement special BMPs in their project design and implementation.

i Home subdivisions of 100 housing units or more.
ii Home subdivisions of 10-99 housing units.
iii Commercial developments greater than 100,000 square feet.
iv Automotive repair shops.
v Restaurants.
vi All hillside development greater than 5,000 square feet.
vii Environmentally Sensitive Areas.
viii Parking lots 5,000 square feet or more or with 15 or more parking spaces, and potentially exposed to urban runoff.
ix Streets, roads, highways, and freeways.

This determination is reflected in Section F.1.b.(2).a. of the National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, and the San Diego Unified Port District, also known as the NPDES Municipal Permit, Order No. 2001-01.

The City of Chula Vista confers with the Regional Board's determination and under the power of authority provided in Section 14.20.120.A. of the Chula Vista Municipal Code establishes the following BMPs and pollution control requirements and procedures for all Priority Development Project Categories in the City of Chula Vista.

The City's Development and Redevelopment Projects Storm Water Management Standards Requirements Manual (Manual) (See Manual, for project review and permitting process requirements) is intended to provide information on how to comply with the City's permanent and construction storm water BMP requirements, including the SUSMP requirements, for private and public development and redevelopment projects in the City of Chula Vista. Therefore, applicants must complete the "Storm Water Requirements Applicability Checklist" in Appendix A of the Manual, to determine if their project is subject to permanent and construction storm water best management practice (BMP) requirements. (Note: this form must be completed for all permit applications, even if previous approvals exist. Projects with previous approvals will be required to comply with the storm water requirements in this document). The checklist must be completed, signed by the responsible party for the project, and submitted to the City with the permit application. For private projects, the project design must include all required permanent BMPs prior to deeming the application package complete. For public projects, the City project manager shall review and approve the required BMP information prior to bidding for construction contracts.

II. BACKGROUND

The municipal storm water National Pollutant Discharge Elimination System (NPDES) permit (Order No. 2001-01, NPDES No. CAS 0108758, hereinafter referred to as "Municipal Permit") issued to San Diego County, the Port of San Diego, and 18 cities (Copermittees) by the San Diego Regional Water Quality Control Board (Regional Board) on February 21, 2001, requires the development and implementation of a program addressing urban runoff pollution issues in development planning for public and private projects.

The requirement to implement a program for development planning is based on federal and state statutes including: Section 402(p) of the Clean Water Act, Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA"), and the California Water Code. The Clean Water Act Amendments of 1987 established a framework for regulating urban runoff discharges from municipal, industrial, and construction activities under the NPDES program. The Municipal Permit requires the implementation of a Jurisdictional Urban Runoff Management program (URMP). The primary objectives of the Jurisdictional URMP requirements are to:

1. Ensure that discharges from municipal urban runoff conveyance systems do not cause or contribute to a violation of water quality standards;
2. Effectively prohibit non-storm water discharges in urban runoff; and
3. Reduce the discharge of pollutants from urban runoff conveyance systems to the Maximum Extent Practicable (MEP statutory standard).

III. SUMMARY

The City of Chula Vista Standard Urban Storm Water Mitigation Plan (SUS MP) is based on a model SUSMP developed collectively by the Copermittees to address post-construction urban runoff pollution from new development and redevelopment projects that fall under "priority projects" categories. The goal of the SUSMP is to develop and implement practical policies to ensure to the maximum extent practicable that development does not increase pollutant loads from a project site and considers urban runoff flow rates and velocities. This goal may be achieved through site-specific controls and/or drainage area-based or shared structural treatment controls. This SUSMP identified appropriate Best Management Practices (BMPs) for certain designated project types to achieve this goal.

Under this SUSMP, the City of Chula Vista will review for approval the SUSMP project plan(s) as part of the development plan approval process for discretionary projects, and prior to issuing permits for ministerial projects. To allow flexibility in meeting SUSMP design standards, structural treatment control BMPs may be located on- or off-site, used singly or in combination, or shared by multiple developments, provided certain conditions are met. Applicants must incorporate all necessary permanent BMPs into the project plans prior to submittal, regardless of project type. In addition, projects subject to priority project (SUSMP) requirements must prepare and submit a Water Quality Technical Report (WQTR) in accordance with Attachment B1. Analysis of the project's anticipated pollutants of concern, anticipated pollutants of concern in

downstream receiving waters, and conditions of concern, must also be included in the Water Quality Technical Report as part of the project submittal

All new development and significant redevelopment projects that fall into one of the following "priority project" categories are subject to these SUSMP requirements, subject to the lawful prior approval provisions of the Municipal Permit. In the instance where a project feature, such as a parking lot, falls into a priority project category, the entire project footprint is subject to these SUSMP requirements. These categories are:

- Residential development of 100 units or more
- Residential development of 10 to 99 units
- Commercial development greater than 100,000 square feet
- Automotive repair shops
- Restaurants
- Hillside development greater than 5,000 square feet
- Projects discharging to receiving waters within Environmentally Sensitive Areas
- Parking lots>5,000 square feet or with>15 parking spaces and potentially exposed to urban runoff
- Streets, roads, highways, and freeways which would create a new paved surface that is 5,000 square feet or greater.

Limited Exclusion: Trenching and resurfacing work associated with utility projects are not considered priority projects. Parking lots, buildings and other structures associated with utility projects are subject to SUSMP requirements if one or more of the criteria for the above categories are met.

IV. CONFLICTS WITH LOCAL PRACTICES OR MUNICIPAL PERMIT

Where requirements of this SUSMP conflict with established local codes, (e.g., specific language of signage used on storm drain stenciling), or the Municipal Permit, the City of Chula Vista will make the final determination of applicability, which shall be binding for development projects.

V. STORM WATER BMP SELECTION PROCEDURE

Section V provides a procedure for identifying a project's pollutants and conditions of concern, and addressing these through site design, source control, and treatment control storm water BMPs. All priority projects shall implement one or a combination of storm water BMPs, including, 1) site design BMPs, 2) source control BMPs and, 3) structural treatment BMPs after the pollutants and conditions of concern have been identified. Storm water BMPs, from those listed in Attachment B2: "Approved Storm Water Best Management Practices", shall be considered and implemented where expressly required by the Permit and if not so required where determined applicable and feasible by the City of Chula Vista. It is recommended that the U.S. Environmental Protection Agency's "Preliminary Data Summary of Urban Runoff Best Management Practices" (August 1999, EPA-821-R-99-012) be used as a guide. The storm water

BMPs shall adhere to the requirements in Section V of this SUSMP, and shall be correctly designed so as to remove pollutants to the maximum extent practicable. A flow chart summarizing the storm water BMP selection procedure is provided in Figure 1 of this Appendix.

Site Design Storm Water Treatment Credits

In the future, the Copermittees may develop and submit for public review and comment and Regional Board approval a model Site Design Storm Water Treatment Credits program, that allows reductions in the volume or flow of storm water that must be captured or treated on a project in return for the inclusion of specific project design features in the project. Any such model program shall specify the conditions under which project proponents can be credited for the use of site design features and low impact development techniques that can reduce the volume of storm water runoff, preserve natural areas, and minimize the pollutant loads generated and potentially discharged from the site. Any Site Design Storm Water Treatment Credits program implemented by the City of Chula Vista within its jurisdiction will be consistent and compliant with the model approved by the Regional Board. The Site Design Storm Water Treatment Credits program shall be deemed to be a part of this SUSMP following Regional Board approval.

Alternative Methods for Achieving Treatment Requirements

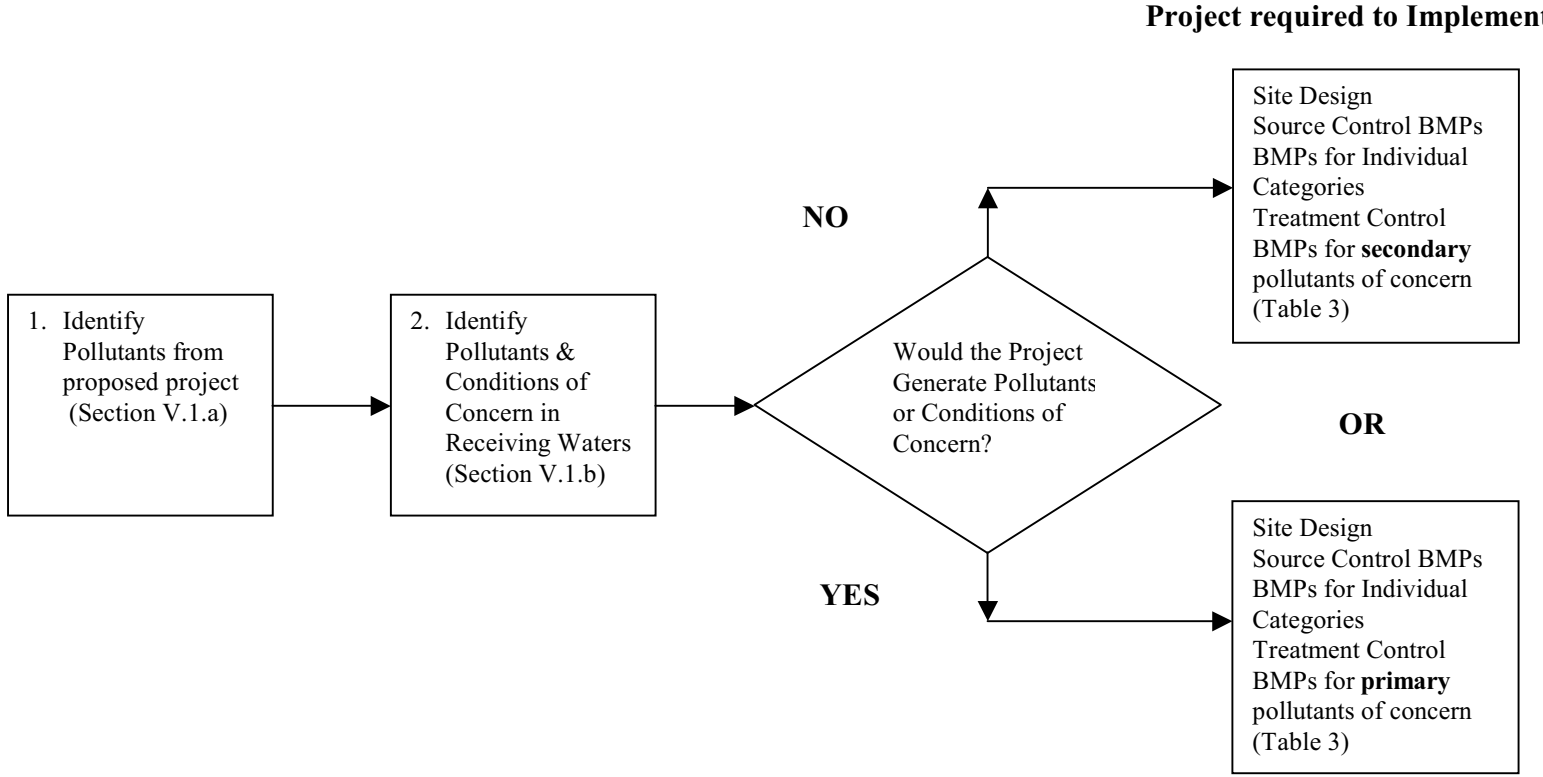
City of Chula Vista may implement Local Equivalent Area Drainage (LEAD) Method, as proposed by the City of San Diego in its May 16, 2002 letter (Attachment B4 of Appendix B) for meeting the BMP requirements in Section V.2.c, Step 8, "Design to Treatment Control BMP Standards," subject to approval by the City of Chula Vista in its sole discretion. The alternative method must minimally meet the following criteria:

- The alternative treatment area shall be located within the proximity of the project;
- The alternative treatment area shall discharge to the same receiving water as the project;
- The alternative treatment area shall be equivalent or greater than the project footprint;
- The alternative treatment area shall have an equivalent or greater impervious surface area than the project;
- The alternative treatment area shall have an equivalent or greater pollutant load than the project;
- Site design and Source Control BMPs (Sections V.2.a & b) shall be required in the project design;
- Alternative treatments shall be limited to redevelopment and/or infill projects.

The alternative method may be implemented for no more than three pilot projects within Chula

Vista during this permit cycle at the discretion of the City of Chula Vista. For each project where an alternative method is implemented, the effectiveness of the alternative method shall be monitored and annually reported to the City of Chula Vista, and by the end of the permit cycle to the Regional Board.

Figure 1. Storm Water BMP Selection Procedure Flow Chart



1. IDENTIFY POLLUTANTS & CONDITIONS OF CONCERN

Priority project proponents shall use this guidance to identify pollutants and conditions of concern, for which they must mitigate or protect against. Once identified, appropriate control measures for these pollutants and conditions are specified in Section V.2 below, "Establish Storm Water BMPs." Site design and source control BMPs are required based on pollutants commonly associated with the proposed project type (see Table 2, "Standard Storm Water BMP Selection Matrix"). Treatment Control BMPs are also required for the project's expected pollutants of concern (see Table 3).

For private and public priority projects, the applicant shall incorporate the requirements listed in the procedure for identifying pollutants and conditions of concern Section.

General Categories of Water Pollution

Urban runoff from a developed site has the potential to contribute pollutants, including oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens to the storm water conveyance system and receiving waters. For the purposes of identifying pollutants of concern and associated storm water BMPs, pollutants are grouped in nine general categories as follows:

1. Sediments – Sediments are soils or other surficial materials eroded and then transported or deposited by the action of wind, water, ice, or gravity. Sediments can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms survival rates, smother bottom dwelling organisms, and suppress aquatic vegetation growth.
2. Nutrients – Nutrients are inorganic substances, such as nitrogen and phosphorus. They commonly exist in the form of mineral salts that are either dissolved or suspended in water. Primary sources of nutrients in urban runoff are fertilizers and eroded soils. Excessive discharge of nutrients to water bodies and streams can cause excessive aquatic algae and plant growth. Such excessive production, referred to as cultural eutrophication, may lead to excessive decay of organic matter in the water body, loss of oxygen in the water, release of toxins in sediment, and the eventual death of aquatic organisms.
3. Metals – Metals are raw material components in non-metal products such as fuels, adhesives, paints, and other coatings. Primary source of metal pollution in storm water are typically commercially available metals and metal products. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. Lead and chromium have been used as corrosion inhibitors in primer coatings and cooling tower systems. At low concentrations naturally occurring in soil, metals are not toxic. However, at higher concentrations, certain metals can be toxic to aquatic life. Humans can be impacted from contaminated groundwater resources, and bioaccumulation of metals in fish and shellfish. Environmental concerns, regarding the potential for release of metals to the environment, have already led to restricted metal usage in certain applications.

4. Organic Compounds – Organic compounds are carbon-based. Commercially available or naturally occurring organic compounds are found in pesticides, solvents, and hydrocarbons. Organic compounds can, at certain concentrations, indirectly or directly constitute a hazard to life or health. When rinsing off objects, toxic levels of solvents and cleaning compounds can be discharged to storm drains. Dirt, grease, and grime retained in the cleaning fluid or rinse water may also adsorb levels of organic compounds that are harmful or hazardous to aquatic life.
5. Trash & Debris – Trash (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic matter (such as leaves, grass cuttings, and food waste) are general waste products on the landscape. The presence of trash & debris may have a significant impact on the recreational value of a water body and aquatic habitat. Excess organic matter can create a high biochemical oxygen demand in a stream and thereby lower its water quality. Also, in areas where stagnant water exists, the presence of excess organic matter can promote septic conditions resulting in the growth of undesirable organisms and the release of odorous and hazardous compounds such as hydrogen sulfide.
6. Oxygen-Demanding Substances – This category includes biodegradable organic material as well as chemicals that react with dissolved oxygen in water to form other compounds. Proteins, carbohydrates, and fats are examples of biodegradable organic compounds. Compounds such as ammonia and hydrogen sulfide are examples of oxygen-demanding compounds. The oxygen demand of a substance can lead to depletion of dissolved oxygen in a water body and possibly the development of septic conditions.
7. Oil and Grease – Oil and grease are characterized as high-molecular weight organic compounds. Primary sources of oil and grease are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids. Introduction of these pollutants to the water bodies are very possible due to the wide uses and applications of some of these products in municipal, residential, commercial, industrial, and construction areas. Elevated oil and grease content can decrease the aesthetic value of the water body, as well as the water quality.
8. Bacteria and Viruses – Bacteria and viruses are ubiquitous microorganisms that thrive under certain environmental conditions. Their proliferation is typically caused by the transport of animal or human fecal wastes from the watershed. Water, containing excessive bacteria and viruses can alter the aquatic habitat and create a harmful environment for humans and aquatic life. Also, the decomposition of excess organic waste causes increased growth of undesirable organisms in the water.
9. Pesticides – Pesticides (including herbicides) are chemical compounds commonly used to control nuisance growth or prevalence of organisms. Excessive application of a pesticide may result in runoff containing toxic levels of its active component.

a. Identify Pollutants from the Project Area

Using Table 1, identify pollutants that are anticipated to be generated from the proposed priority project categories. Pollutants associated with any hazardous material sites that have been remediated or are not threatened by the proposed project are not considered a pollutant of concern.

Table 1. Anticipated and Potential Pollutants Generated by Land Use Type.

	General Pollutant Categories								
Priority Project Categories	Sediments	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Detached Residential Development	X	X			X	X	X	X	X
Attached Residential Development	X	X			X	P(1)	P(2)	P	X
Commercial Development >100,000 ft^2	P(1)	P(1)		P(2)	X	P(5)	X	P(3)	P(5)
Automotive Repair Shops			X	X(4)(5)	X		X		
Restaurants					X	X	X	X	
Hillside Development >5,000 ft^2	X	X			X	X	X		X
Parking Lots	P(1)	P(1)	X		X	P(1)	X		P(1)
Streets, Highways & Freeways	X	P(1)	X	X(4)	X	P(5)	X		

X = anticipated
P = potential
(1) A potential pollutant if landscaping exists onsite.
(2) A potential pollutant if the project includes uncovered parking areas.
(3) A potential pollutant if land use involves food or animal waste products.
(4) Including petroleum hydrocarbons.
(5) Including solvents.

b. Identify Pollutants of Concern

Pollutants generated by the proposed priority project, that exhibit one or more of the following characteristics are considered primary pollutants of concern:

- Current loadings or historical deposits of the pollutant are impairing the beneficial uses of a receiving water;
- Elevated levels of the pollutant are found in water or sediments of a receiving water and/or have the potential to be toxic to or bioaccumulate in organisms therein; and
- Inputs of the pollutant are at a level high enough to be considered potentially toxic.

To identify primary pollutants of concern in receiving waters, each priority project shall, at a minimum, do the following:

1. For each of the proposed project's discharge points, identify the receiving water(s) that each discharge point proposes to discharge to, including hydrologic unit basin number(s), as identified in the most recent version of the *Water Quality Control Plan for the San Diego Basin*[1], prepared by the San Diego Regional Water Quality Control Board.
2. Identify any receiving waters, into which the developed area would discharge to, listed on the most recent list of Clean Water Act Section 303(d) impaired water bodies[2]. List any and all pollutants for which the receiving waters are impaired.
3. Compare the list of pollutants for which the receiving waters are impaired with the pollutants anticipated to be generated by the project (as identified in Table 1). Any pollutants identified by Table 1, which are also causing impairment of receiving waters shall be considered primary pollutants of concern.

For projects where no primary pollutants of concern exist, those pollutants identified through the use of Table 1 shall be considered secondary pollutants of concern.

c. Identify Conditions of Concern

Common impacts to the hydrologic regime resulting from development typically include increased runoff volume and velocity; reduced infiltration; increased flow frequency, duration, and peaks; faster time to reach peak flow; and water quality degradation. These changes may have the potential to permanently impact downstream channels and in some instances may impact habitat integrity. A change to a priority project site's hydrologic regime is shown to be considered a condition of concern if the change would impact downstream channels and habitat integrity.

Because of these potential impacts, the following steps shall be followed by each priority project:

1. http://www.swrcb.ca.gov/~rwqcb9/Programs/Planning_and_Services/SD_Basin/sd_basin.html
2. http://www.swrcb.ca.gov/tmdl/303d_lists.html, San Diego is in Region 9

1. Evaluate the project's conditions of concern in a drainage study report prepared by a Registered Civil Engineer in the State of California, with experience in fluvial geomorphology and water resources management. The report shall consider the project area's location (from the larger watershed perspective), topography, soil and vegetation conditions, percent impervious area, natural and infrastructure drainage features, and any other relevant hydrologic and environmental factors to be protected specific to the project area's watershed.

2. As part of the drainage study, the civil engineer shall conduct a field reconnaissance to observe and report on downstream conditions, including undercutting erosion, slope stability, vegetative stress (due to flooding, erosion, water quality degradation, or loss of water supplies) and the area's susceptibility to erosion or habitat alteration as a result of an altered flow regime.

3. The drainage study shall compute rainfall runoff characteristics from the project area including, at a minimum, peak flow rate, flow velocity, runoff volume, time of concentration, and retention volume. These characteristics shall be developed for the two-year and 10-year frequency, Type I storm, of six-hour or 24-hour duration (whichever is the closer approximation of the site's time of concentration), during critical hydrologic conditions for soil and vegetative cover[3]. The drainage study shall report the project's conditions of concern based on the hydrologic and downstream conditions discussed above. Where downstream conditions of concern have been identified, and have shown to impact downstream channels and habitat integrity, the drainage study shall establish that pre-project hydrologic conditions affecting downstream conditions of concern would be maintained by the proposed project, satisfactory to the City of Chula Vista, by incorporating the site design, source control, and treatment control requirements identified in Section V.2.

2. ESTABLISH STORM WATER BMPs

Site design BMPs reduce the need for source and/or treatment control BMPs, and source control BMPs may reduce the amount of treatment control BMPs needed. As describe below, all priority projects shall consider, incorporate, and implement where determined applicable and feasible by the City of Chula Vista, storm water BMPs into the project design, in the following progression:

- Site Design BMPs
- Source Control BMPs
- Treatment Control BMPs

At a minimum, priority projects must implement source control BMPs, and must implement

3. Design storms can be found at http://www.wrcc.dri.edu/pcpnfreq.html. Storm events may be calculated using local rain data. In addition, isopluvial maps contained in the County of San Diego Hydrology Manual may be used to extrapolate rainfall data to areas where insufficient data exists. If isopluvial maps are selected, developers shall describe their method for using isopluvial maps in their hydrology study.

treatment control BMPs unless a waiver is granted based on the infeasibility of all treatment control BMPs. BMPs must also achieve certain performance standards set out in the municipal permit section F.2.(b) (i to xiv). Selection of BMPs from the menus included in this SUSMP, using the rules set out in this SUSMP, will in general fulfill these requirements.

In addition, runoff treated by site design or source control BMPs, such as rooftop runoff treated in landscaping, may be useful in reducing the quantity of runoff required to be treated in Section V.2.c, "Treatment Control BMPs".

To select a structural treatment BMP using the Treatment Control BMP Selection Matrix, each priority project shall compare the list of pollutants for which the downstream receiving waters are impaired (if any), with the pollutants anticipated to be generated by the project (as identified in Table 1). Any pollutants identified by Table 1, which are also causing a Clean Water Act section 303(d) impairment of the receiving waters of the project shall be considered primary pollutants of concern. Priority projects that are anticipated to generate a primary pollutant of concern shall meet all applicable requirements in Section V.2, and shall select a single or combination of storm water BMPs from Table 3, which maximizes pollutant removal for the particular primary pollutant(s) of concern.

Priority projects that are <u>not</u> anticipated to generate a pollutant for which the receiving water is Clean Water Act Section 303(d) impaired shall meet applicable standard requirements in Section V.2, and shall select a single or combination of storm water BMPs from Table 3 which are effective for pollutant removal of the identified secondary pollutants of concern, consistent with the "maximum extent practicable" standard defined in Attachment D of the Municipal Permit.

Where a site generates both primary and secondary pollutants of concern, primary pollutants of concern receive priority for BMP selection. For such sites, selected BMPs must only maximize pollutant removal for the primary pollutants of concern. Where a site generates only secondary pollutants of concern, selected BMPs shall target the secondary pollutant of concern determined to be most significant for the project. Selected BMPs must be effective for the widest range of pollutants of concern, anticipated to be generated by a priority project (as identified in Table 1), consistent with the maximum extent practicable standard defined in Attachment D of the Municipal Permit.

Alternative storm water BMPs not identified in Table 3 may be approved at the discretion of the City of Chula Vista, provided the alternative BMP is as effective in removal of pollutants of concern as other feasible BMPs listed in Table 3.

Table 2. Site Design and Source Control Storm Water BMP Selection Matrix

Priority Project Category	*Site Design BMPs(1)*	*Source Control BMPs(2)*		*Requirements Applicable to Individual Priority Project Categories(3)*										
				a. Private Roads	b. Residential Driveways & Guest Parking	c. Dock Areas	d. Maintenance Bays	e. Vehicle Wash Areas	f. Outdoor Processing Areas	g. Equipment Wash Areas	h. Parking Areas	i. Roadways	j. Fueling Areas	k. Hillside Landscaping
Detached Residential Development	R	R		R	R									R
Attached Residential Development	R	R		R										
Commercial Development >100,000 ft^2	R	R				R	R	R	R					
Automotive Repair Shop	R	R				R	R	R		R			R	
Restaurants	R	R				R				R				
Hillside Development >5,000 ft^2	R	R		R										R
Parking Lots	R	R									R(4)			
Streets, Highways & Freeways	R	R										R		

R = Required; select one or more applicable and appropriate BMPs from the applicable steps in Section V.2.a & b or equivalent as identified in Attachment B2.
S = Select one or more applicable and appropriate treatment control BMPs from Attachment B2.
(1) Refer to Section V.2.a.
(2) Refer to Section V.2.b.
(3) Priority project categories must apply specific storm water BMP requirements, where applicable. Projects are subject to the requirements of all priority project categories that apply.
(4) Applies if the paved area totals >5,000 square feet or with >15 parking spaces and is potentially exposed to urban runoff.

Table 3. Treatment Control BMP Selection Matrix[1].

Pollutant of Concern	*Treatment Control BMP Categories*						
	Biofilters	Detention Basins	Infiltration Basins[2]	Wet Ponds or Wetlands	Drainage Inserts	Filtration	Hydrodynamic Separator Systems[3]
Sediment	M	H	H	H	L	H	M
Nutrients	L	M	M	M	L	M	L
Heavy Metals	M	M	M	H	L	H	L
Organic Compounds	U	U	U	U	L	M	L
Trash & Debris	L	H	U	U	M	H	M
Oxygen Demanding Substances	L	M	M	M	L	M	L
Bacteria	U	U	H	U	L	M	L
Oil & Grease	M	M	U	U	L	H	L
Pesticides	U	U	U	U	L	U	L

(1) Copermittees are encouraged to periodically assess the performance characteristics of many of these BMPs to update this table.
(2) Including trenches and porous pavement.
(3) Also known as hydrodynamic devices and baffle boxes.

L: Low removal efficiency:
M: Medium removal efficiency:
H: High removal efficiency:
U: Unknown removal efficiency

Sources: *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* (1993), *National Stormwater Best Management Practices Database* (2001), and *Guide for BMP Selection in Urban Developed Areas* (2001).

a. Site Design BMPs

Priority projects shall be designed so as to minimize, to the maximum extent practicable, the introduction of pollutants and conditions of concern that may result in significant impacts, generated from site runoff to the storm water conveyance system. Priority Projects shall also control post-development peak storm water runoff discharge rates and velocities to maintain or reduce pre-development downstream erosion and to protect stream habitat. Although not mandatory, priority projects can address these objectives through the creation of a hydrologically functional project design that attempts to mimic the natural hydrologic regime. Mimicking a site's natural hydrologic regime can be pursued by:

- Reducing imperviousness, conserving natural resources and areas, maintaining and using natural drainage courses in the storm water conveyance system, and minimizing clearing and grading.
- Providing runoff storage measures dispersed uniformly throughout a site's landscape with the use of a variety of detention, retention, and runoff practices.
- Implementing on-lot hydrologically functional landscape design and management

practices.

These design principles offer an innovative approach to urban storm water management, one that does not rely on the conventional end-of-pipe or in-the-pipe structural methods but instead uniformly or strategically integrates storm water controls throughout the urban landscape. Useful resources for applying these principles, referenced in the appendix, include *Start at the Source* (1999), and *Low-Impact Development Design Strategies* (1999).

Step 1: Objective: Maintain Pre-Development Rainfall Runoff Characteristics

Priority projects shall control post-development peak storm water runoff discharge rates and velocities to maintain or reduce pre-development downstream erosion. In addition, projects should control runoff discharge volumes and durations to the maximum extent practicable using the site design, source control, and treatment control requirements identified in Section V.2.

Design Concept 1: Minimize Project's Impervious Footprint & Conserve Natural Areas

The following site design options shall be considered and, incorporated and implemented where determined applicable and feasible by the developer, and as approved by the City of Chula Vista, during the site planning and approval process, consistent with applicable General Plan policies and other development regulations.

1. Minimize impervious footprint. This can be achieved in various ways, including, but not limited to increasing building density (number of stories above or below ground) and developing land use regulations seeking to limit impervious surfaces. Decreasing the project's footprint can substantially reduce the project's impacts to water quality and hydrologic conditions.

2. Conserve natural areas where feasible. This can be achieved by concentrating or clustering development on the least environmentally sensitive portions of a site, while leaving the remaining land in a natural, undisturbed condition. The following list provides a guideline for determining the least sensitive portions of the site, in order of increasing sensitivity. Developers should also refer to the City's Multiple Species Conservation Plan or other biological regulations, as appropriate.

    a. Areas devoid of vegetation, including previously graded areas and agricultural fields.
    b. Areas of non-native vegetation, disturbed habitats and eucalyptus woodlands.
    c. Areas of chamise or mixed chaparral, and non-native grasslands.
    d. Areas containing coastal scrub communities.
    e. All other upland communities.
    f. Occupied habitat of sensitive species and all wetlands (as both are defined by the City of Chula Vista).
    g. All areas necessary to maintain the viability of wildlife corridors. Within each of the previous categories, areas containing hillsides (as defined in

Appendix F) should be considered more sensitive than the same category without hillsides.

3. Construct walkways, trails, patios, overflow parking lots and alleys and other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.

4. Construct streets, sidewalks and parking lot aisles to the minimum widths necessary, provided that public safety and a walkable environment for pedestrians are not compromised.

5. Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought tolerant trees and large shrubs.

6. Minimize the use of impervious surfaces, such as decorative concrete, in the landscape design.

7. Use natural drainage systems to the maximum extent practicable.

8. Other site design options, which are comparable and equally effective.

Design Concept 2: Minimize Directly Connected Impervious Areas (DCIAs)

Priority projects shall consider, and incorporate and implement the following design characteristics, where determined applicable and feasible by the Copermittee.

1. Where landscaping is proposed, drain rooftops into adjacent landscaping prior to discharging to the storm drain.
2. Where landscaping is proposed, drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping.
3. Other design characteristics, which are comparable and equally effective.

Step 2: Protect Slopes and Channels

Project plans shall include storm water BMPs to decrease the potential for erosion of slopes and/or channels, consistent with local codes and ordinances and with the approval of all agencies with jurisdiction over the project, e.g., the U.S. Army Corps of Engineers, the San Diego Regional Water Quality Control Board, and the California Department of Fish and Game. The following design principles shall be considered, and incorporated and implemented where determined applicable and feasible by the City of Chula Vista:

1. Convey runoff safely from the tops of slopes.
2. Vegetate slopes with native or drought tolerant vegetation.
3. Control and treat flows in landscaping and/or other controls prior to reaching

existing natural drainage systems.

4. Stabilize permanent channel crossings.
5. Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.
6. Other design principles that are comparable and equally effective.

b. Source Control BMPs

Step 3: Provide Storm Drain System Stenciling and Signage

Storm drain stencils are highly visible source control messages, typically placed directly adjacent to storm drain inlets. The stencils contain a brief statement that prohibits the dumping of improper materials into the urban runoff conveyance system. Graphical icons, either illustrating anti-dumping symbols or images of receiving water fauna, are effective supplements to the anti-dumping message. Priority projects shall include the following requirements in the project design.

1. Provide stenciling, labeling, or stamping in fresh concrete of all storm drain inlets and catch basins within the project area with prohibitive language (such as: "NO DUMPING – I LIVE DOWNSTREAM") and graphical icons to discourage illegal dumping, according to City approved designs.
2. Post signs and prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area, according to City approved design.
3. Maintain legibility of stencils and signs.

Step 4: Design Outdoor Material Storage Areas to Reduce Pollution Introduction

Improper storage of materials outdoors may increase the potential for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to enter the urban runoff conveyance system. Where the priority project plans include outdoor areas for storage of hazardous materials that may contribute pollutants to the urban runoff conveyance system, the following storm water BMPs are required:

1. Hazardous materials with the potential to contaminate urban runoff shall either be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the storm water conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs.
2. The storage area shall be paved and sufficiently impervious to contain leaks and spills.
3. The storage area shall have a roof or awning to minimize direct precipitation within the secondary containment area.

Step 5: Design Trash Storage Areas to Reduce Pollution Introduction

All trash container areas shall meet the following requirements (limited exclusion: detached residential homes):

1. Paved with an impervious surface, designed not to allow run-on from adjoining areas, screened or walled to prevent off-site transport of trash; and
2. Provide attached lids on all trash containers, that exclude rain; or roof or awning to minimize direct precipitation.

Step 6: Use Efficient Irrigation Systems & Landscape Design, and Employ Integrated Pest Management Principles

Priority projects shall design the timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water conveyance system. (Limited exclusion: detached residential homes.) The following methods to reduce excessive irrigation runoff shall be considered, and incorporated and implemented where determined applicable and feasible by the City:

1. Employing rain shutoff devices to prevent irrigation after precipitation.
2. Designing irrigation systems to each landscape area's specific water requirements.
3. Using flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
4. Employing other comparable, equally effective, methods to reduce irrigation water runoff.

Employ Integrated Pest Management Principles:

Integrated Pest Management (IPM) is an ecosystem-based pollution prevention strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant plant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment. More information may be obtained at the UC Davies website (http://www.ipm.ucdavis.edu/WATER/U/index.html).

1. Eliminate and/or reduce the need for pesticide use in the project design by:
   a) Plant pest-resistant or well-adapted plant varieties such as native plants; and
   b) Discourage pests by modifying the site and landscaping design. Pollution prevention is the primary "first line of defense" because pollutants that are never used do not have to be controlled or treated (methods which are inherently less efficient).
2. Distribute IPM educational materials to future site residents/tenants. Minimally,

educational materials must address the following topics:

a) Keeping pests out of buildings and landscaping using barriers, screens, and caulking;
b) Physical pest elimination techniques, such as, weeding, squashing, trapping, washing, or pruning out pests;
c) Relying on natural enemies to eat pests;
d) Proper use of pesticides as a last line of defense.

Step 7: Incorporate Requirements Applicable to Individual Priority Project Categories

Where identified in Table 2, the following requirements shall be incorporated into applicable priority projects during the storm water BMP selection and design process. Projects shall adhere to each of the individual priority project category requirements that apply to the project (e.g., a restaurant with more than 15 parking spaces would be required to incorporate the requirements for "g. Equipment Wash Areas" and "h. Parking Areas" into the project design).

a. Private Roads

The design of private roadway drainage shall use at least one of the following (for further guidance, see *Start at the Source* [1999]):

1. Rural swale system: Street sheet flows to vegetated swale or gravel shoulder, curbs at street corners, culverts under driveways and street crossings;
2. Urban curb/swale system: street slopes to curb, periodic swale inlets drain to vegetated swale/biofilter;
3. Dual drainage system: First flush captured in street catch basins and discharged to adjacent vegetated swale or gravel shoulder, high flows connect directly to storm water conveyance system.
4. Other methods that are comparable and equally effective within the project.

b. Residential Driveways & Guest Parking

The design of driveways and private residential parking areas shall use one at least of the following features.

1. Design driveways with shared access, flared (single lane at street) or wheelstrips (paving only under tires); or, drain into landscaping prior to discharging to the storm water conveyance system.
2. Uncovered temporary or guest parking on private residential lots may be: paved with a permeable surface; or, designed to drain into landscaping prior to discharging to the storm water conveyance system.
3. Other features which are comparable and equally effective.

c. Dock Areas

Loading/unloading dock areas shall include the following:

1. Cover loading dock areas, or design drainage to preclude urban run-on and runoff.
2. Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.
3. Other features which are comparable and equally effective.

d. Maintenance Bays

Maintenance bays shall include the following:

1. Repair/maintenance bays shall be indoors; or, designed to preclude urban run-on and runoff; and
2. Design a repair/maintenance bay drainage system to capture all wash water, leaks and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is prohibited. If required by the City, obtain an Industrial Waste Discharge Permit.

OR

3. Other features which are comparable and equally effective, as approved by the City.

e. Vehicle Wash Areas

Priority projects that include areas for washing/steam cleaning of vehicles shall use the following:

1. Self-contained; or covered with a roof or overhang;
2. Equipped with a clarifier or other pretreatment facility;
3. Properly connected to a sanitary sewer;
4. Other features which are comparable and equally effective.

f. Outdoor Processing Areas

Outdoor process equipment operations, such as rock grinding or crushing, painting or coating, grinding or sanding, degreasing or parts cleaning, landfills, waste piles, and wastewater and solid waste treatment and disposal, and other operations determined to be a potential threat to water quality by the City of Chula Vista shall adhere to the following requirements:

1. Cover or enclose areas that would be the most significant source of pollutants; or, slope the area toward a dead-end sump; or, discharge to the sanitary sewer system following appropriate treatment in accordance with conditions established by the applicable sewer agency;
2. Grade or berm area to prevent run-on from surrounding areas;

3. Installation of storm drains in areas of equipment repair is prohibited;
4. Other features which are comparable or equally effective.

g. Equipment Wash Areas

Outdoor equipment/accessory washing and steam cleaning activities at priority projects shall use the following:

1. Be self-contained; or covered with a roof or overhang;
2. Be equipped with a clarifier, grease trap or other pretreatment facility, as appropriate;
3. Be properly connected to a sanitary sewer after obtaining a permit from the City of San Diego Metropolitan Wastewater Department;
4. Other features which are comparable or equally effective.

h. Parking Areas

To minimize the offsite transport of pollutants from parking areas, the following design concepts shall be considered, and incorporated and implemented where determined applicable and feasible by the City of Chula Vista:

1. Where landscaping is proposed in parking areas, incorporate landscape areas into the drainage design;
2. Overflow parking (parking stalls provided in excess of the City of Chula Vista's minimum parking requirements) may be constructed with permeable paving;
3. Other design concepts that are comparable and equally effective, as approved by the City.

i. Roadways

Priority roadway projects shall select treatment control BMPs following the enhanced treatment control selection procedure identified in Section V.2, "Establish Storm Water BMPs."

j. Fueling Area

Non-retail fuel dispensing areas shall contain the following:

1. Overhanging roof structure or canopy. The cover's minimum dimensions must be equal to or greater than the area within the grade break. The cover must not drain onto the fuel dispensing area and the downspouts must be routed to prevent drainage across the fueling area. The fueling area shall drain to the project's treatment control BMP(s) prior to discharging to the storm water conveyance system;
2. Paved with Portland cement concrete (or equivalent smooth impervious surface). The use of asphalt concrete shall be prohibited;
3. Have an appropriate slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of urban runoff;
4. At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from

the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.

k. Steep Hillside Landscaping

Hillside areas, as defined in this SUSMP, that are disturbed by project development shall be landscaped with deep-rooted, drought tolerant plant species selected for erosion control, satisfactory to the City of Chula Vista.

c. Treatment Control BMPs

Minimizing a development's detrimental effects on water quality can be most effectively achieved through the use of a combination of site design, source and treatment control storm water BMPs. Where projects have been designed to minimize, to the maximum extent practicable, the introduction of anticipated pollutants of concern that may result in significant impacts to the receiving waters through the implementation of site design and source control storm water BMPs, the development would still have the potential for pollutants of concern to enter the storm water conveyance system. Therefore, priority projects shall be designed to remove pollutants of concern from the storm water conveyance system to the maximum extent practicable through the incorporation and implementation of treatment control BMPs.

In meeting the requirements in this section, priority projects shall implement a single or combination of storm water BMPs that will remove anticipated pollutants of concern, as identified by the procedure in Section V.1, in site runoff to the maximum extent practicable. Treatment control BMPs must be implemented unless a waiver is granted to the project by the City of Chula Vista based on the infeasibility of any treatment control BMP.

Step 8: Design to Treatment Control BMP Standards

All priority projects shall design, construct and implement structural treatment control BMPs that meet the design standards of this section, unless specifically exempted by the limited exclusions listed at the end of Step 8. Structural treatment control BMPs required by this section shall be operational prior to the use of any dependent development, and shall be located and designed in accordance with the requirements here in Step 8 and below in Step 9.

Volume

1. Volume-based BMPs shall be designed to mitigate (infiltrate, filter, or treat) either:

   i. The volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the local historical rainfall record (0.6 inch approximate average for the San Diego County area)[4]; or

   ii. The volume of runoff produced by the 85th percentile 24-hour runoff event, determined as the maximized capture urban runoff volume for the area, from the formula recommended in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice No. 87, (1998*); or

   iii. The volume of annual runoff based on unit basin storage volume, to achieve 90 percent or more volume treatment by the method recommended in *California Storm Water Best Management Practices Handbook – Industrial/ Commercial, (1993)*, or

   iv. The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile 24-hour runoff event,[5]

OR

Flow

2. Flow-based BMPs shall be designed to mitigate (infiltrate, filter, or treat) either:

   i. The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour for each hour of a storm event; or

   ii. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two, for each hour of a storm event; or

   iii. The maximum flow rate of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two, for each hour of a storm event.

Limited Exclusions:

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4. This volume is not a single volume to be applied to all of San Diego County. The size of the 85th percentile storm event is different for various parts of the County. The 85th percentile storm event may be calculated using local rain data. In addition, isopluvial maps contained in the County of San Diego Hydrology Manual may be used to extrapolate rainfall data to areas where insufficient data exists. If isopluvial maps are selected, developers shall describe their method for using isopluvial maps in their studies.

5. Under this volume criterion, hourly rainfall data may be used to calculate the 85th percentile storm event, where each storm event is identified by its separation from other storm events by at least six hours of no rain. If hourly rainfall data is selected, the developers shall describe the method using hourly rainfall data in their studies.

1. Proposed restaurants, where the land area for development or redevelopment is less than 5,000 square feet, are excluded from the numerical sizing criteria requirements listed in Section V.2.c, Step 8.
2. Where significant redevelopment results in an increase of less than 50 percent of the impervious surfaces of a previously existing development, and the existing development was not subject to SUSMP requirements, the numeric sizing criteria discussed in Section V.2.c, Step 8 apply only to the addition, and not to the entire development.

Step 9: Locate BMPs Near Pollutant Sources

Structural treatment control storm water BMPs should be implemented, to the extent feasible, close to pollutant sources to minimize costs and maximize pollutant removal prior to runoff entering receiving waters. Such BMPs may be located on- or off-site, used singly or in combination, or shared by multiple new developments, pursuant to the following requirements:

1. All structural treatment control BMPs shall be located so as to infiltrate, filter, and/or treat the required runoff volume or flow prior to its discharge to any receiving water body supporting beneficial uses;
2. Multiple post-construction structural treatment control BMPs for a single priority development project shall collectively be designed to comply with the design standards of Step 8;
3. Shared storm water BMPs shall be operational prior to the use of any dependent development or phase of development. The shared BMPs shall only be required to treat the dependent developments or phases of development that are in use;
4. Interim storm water BMPs that provide equivalent or greater treatment than is required by Step 8 may be implemented by a dependent development until each shared BMP is operational. If interim BMPs are selected, the BMPs shall remain in use until permanent BMPs are operational.

Step 10: Restrictions on Use of Infiltration BMPs

Three factors significantly influence the potential for urban runoff to contaminate ground water. They are (i) pollutant mobility, (ii) pollutant abundance in urban runoff, (iii) and soluble fraction of pollutant. The risk of contamination of groundwater may be reduced by pretreatment of urban runoff. A discussion of limitations and guidance for infiltration practices is contained in, *Potential Groundwater Contamination from Intentional and Non-Intentional Stormwater Infiltration, Report No. EPA/600/R-94/051, USEPA (1994).*

To protect groundwater quality, restrictions may be applied by the City of Chula Vista in its sole discretion to the use of any BMPs that are designed to primarily function as infiltration devices (such as infiltration trenches and infiltration basins). As additional ground water basin data is obtained, the City may develop additional restrictions on the use of any BMPs that allow incidental infiltration. At a minimum, use of structural treatment BMPs that are designed to

primarily function as infiltration devices shall meet the following conditions[6]:

1. Urban runoff from commercial developments shall undergo pretreatment to remove both physical and chemical contaminants, such as sedimentation or filtration, prior to infiltration.

2. All dry weather flows shall be diverted from infiltration devices except for those non-storm water discharges authorized pursuant to 40 CFR 122.26(d)(2)(iv)(B)(1): diverted stream flows, rising ground waters, uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to storm water conveyance systems, uncontaminated pumped ground water, foundation drains, springs, water from crawl space pumps, footing drains, air conditioning condensation, flow from riparian habitats and wetlands, water line flushing, landscape irrigation, discharges from potable water sources other than water main breaks, irrigation water, individual residential car washing, and dechlorinated swimming pool discharges.

3. Pollution prevention and source control BMPs shall be implemented at a level appropriate to protect groundwater quality at sites where infiltration structural treatment BMPs are to be used.

4. The vertical distance from the base of any infiltration structural treatment BMP to the seasonal high groundwater mark shall be at least 10 feet or as determined on an individual, site-specific basis by the City of Chula Vista. Where groundwater does not support beneficial uses, this vertical distance criterion may be reduced, provided groundwater quality is maintained.

5. The soil through which infiltration is to occur shall have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) that are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses.

6. Infiltration structural treatment BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as determined by the City of Chula Vista.

7. The horizontal distance between the base of any infiltration structural BMP and any water supply wells should be 100 feet or as determined on an individual, site-specific basis by the City of Chula Vista.

Where infiltration BMPs are authorized, their performance shall be evaluated for impacts on

6. These conditions do not apply to structural treatment BMPs which allow incidental infiltration and are not designed to primarily function as infiltration devices (such as grassy swales, detention basins, vegetated buffer strips, constructed wetlands, etc.)

groundwater quality. The City of Chula Vista may develop and require implementation of additional restrictions on the use of treatment control BMPs that are designed to primarily function as infiltration devices. Pursuant to Municipal Permit Section D.1.g. requirements to control the contribution of pollutants from one portion of the watershed to another portion of the watershed, the City of Chula Vista may enter into agreements with other agencies. In those instances where the City of Chula Vista determined that implementation of proposed infiltration BMPs within its jurisdiction has a potential impact to groundwater quality in another jurisdiction, the City may include a notification requirement be placed upon those proposing such use in addition to the above protection measures.

3. PROVIDE PROOF OF ONGOING STORM WATER BMP MAINTENANCE

The City of Chula Vista will not consider structural BMPs "effective," and therefore will not accept storm water BMPs as meeting the MEP standard, unless a mechanism is in place that will ensure ongoing long-term maintenance of all structural BMPs. This mechanism may be provided by the City or by the project proponent. As part of project review, if a project proponent is required to include interim or permanent structural BMPs in project plans, and if the City does not provide a mechanism for BMP maintenance, the City will require that the applicant provide verification of maintenance requirements through such means as may be appropriate, at the discretion of the City of Chula Vista, such as covenants, legal agreements, maintenance agreements, and/or conditional use permits (see Attachment D1 of Appendix D, for City preferred maintenance mechanism).

Maintenance Mechanisms

1. Public entity maintenance: The City in its discretion may approve a public or acceptable quasi-public entity (e.g., the County Flood Control District, or annex to an existing assessment district, an existing utility district, a state or federal resource agency, or a conservation conservancy) to assume responsibility for maintenance, repair and replacement of the BMP. Unless otherwise approved by the City, public entity maintenance agreements shall ensure estimated costs are front-funded or reliably guaranteed, (e.g., through a trust fund, assessment district fees, bond, letter of credit or similar means). In addition, the City may seek protection from liability by appropriate releases and indemnities. Storm water BMPs within the City's jurisdiction proposed for transfer to any other public entity will be subject to approval by the City before installation. The project proponent must take all steps necessary to ensure that the City is involved in the negotiation of maintenance requirements within its jurisdiction with any other public entities accepting maintenance responsibilities; and in negotiations with the resource agencies responsible for issuing permits for the construction and/or maintenance of the facilities. The City must be identified as a third party beneficiary empowered to enforce any such maintenance agreement within its jurisdiction.
2. Project proponent agreement to maintain storm water BMPs: The City may enter into a contract with the project proponent obliging the project proponent to maintain, repair and replace the storm water BMP as necessary in perpetuity. Security may be required by the City in its discretion.

3. Assessment districts: The City may approve an Assessment District or other funding mechanism created by the project proponent to provide funds for storm water BMP maintenance, repair and replacement on an ongoing basis. Any agreement with such a District shall be subject to the Public Entity Maintenance Provisions above.
4. Lease provisions: In those cases where City of Chula Vista holds title to the land in question, and the land is being leased to another party for private or public use, the City may assure storm water BMP maintenance, repair and replacement through conditions in the lease.
5. Conditional use permits: For discretionary projects only, the City may assure maintenance of storm water BMPs through the inclusion of maintenance conditions in the conditional use permit. Security may be required by the City in its discretion.
6. Alternative mechanisms: The City may in its discretion accept alternative maintenance mechanisms if such mechanisms are as protective as those listed above.

Verification Mechanisms

For discretionary projects, the City-approved method of storm water BMP maintenance shall be incorporated into the project's permit, and shall be consistent with permits issued by resource agencies, before decision-maker approval of discretionary permits. For projects requiring only ministerial permits, the City-approved method of storm water BMP maintenance shall be incorporated into the permit conditions before the issuance of any ministerial permits. In all instances, the project proponent shall provide proof of execution of a City-approved method of maintenance repair and replacement before the issuance of construction approvals. For public projects that are not required to obtain permits a City-approved method of storm water BMP maintenance repair and replacement shall be executed prior to the commencement of construction. For all properties, the verification mechanism shall include the project proponent's signed statement, as part of the project application, accepting responsibility for all structural BMP maintenance, repair and replacement, until a City-approved entity assumes responsibility for structural BMP maintenance, repair and replacement.

Maintenance Requirements

1. Operation & Maintenance (O&M) Plan: A copy of an Operation & Maintenance (O&M) plan, prepared by the project proponent and as approved by the City, shall be attached to the approved maintenance agreement, which describes the designated responsible party to manage the storm water BMP(s), employee's training program and duties, operating schedule, maintenance frequency, routine service schedule, specific maintenance activities, copies of resource agency permits, and any other necessary activities. At a minimum, maintenance agreements shall require the inspection and servicing of all structural BMPs on an annual basis. The project proponent or City-approved maintenance entity shall complete and maintain O&M forms to document all maintenance requirements. Parties responsible for the O&M plan shall retain records for at least 5 years. These documents shall be made available to the City for inspection upon request at any time.

2. Access Easement/Agreement: As part of the maintenance mechanism selected above, the City will require the inclusion of a copy of an executed access easement in a form approved by the City that shall run with the land throughout the life of the project, until such time that the storm water BMP requiring access is replaced and access is no longer needed, all to the satisfaction of the City of Chula Vista.

4. WAIVER OF STRUCTURAL TREATMENT BMP REQUIREMENTS

If infeasibility can be demonstrated to the satisfaction of the City, the project's requirement of implementing structural treatment BMPs ("Design to Treatment Control BMP Standards") may be waived by the City. The City will only grant a waiver of infeasibility when the City is satisfied that all available structural treatment BMPs have been considered and appropriately rejected as infeasible. The City will notify the Regional Board within 5 days of each waiver issued and will include the name of the person granting each waiver.

Waivers may only be granted as to the requirements for structural treatment BMP and structural treatment BMP sizing requirements. Priority development projects, whether or not granted a waiver may not cause or contribute to an exceedance of water quality objectives. Pollutants in runoff from projects granted a waiver must still be reduced to the maximum extent practicable.

The City has the discretion to implement a wavier program. If the City chooses to implement a waiver program, it may also develop a SUSMP waiver impact fee program, to require project proponents who have received waivers to transfer the savings in cost, or a proportionate share thereof, as determined by the City, to a storm water mitigation fund. The City will notify the Regional Board if a SUSMP waiver impact fee program is developed pursuant to this SUSMP. Further details for any SUSMP waiver impact fee program may be set out in supplemental submissions of this SUSMP if multiple jurisdictions establish a joint mitigation fund program for the San Diego Bay watershed.

This SUSMP does not preclude the City, acting alone or in partnership with other agencies, from imposing any other fees or charges on development projects that are permitted by law, or from managing or expending the monies received from such non-SUSMP programs in any manner authorized by law.